

gains look like?” His team will evaluate the model, for example by comparing its predictions with experimental results, and make a detailed analysis public.

“I do think the experiment, negative or positive, is incredibly valuable,” he says. Some scientists and funding agencies are looking to create AI-feeding structural databases similar to those of the pharma companies, says AlQuraishi, and it will be worth knowing whether having more data is actually useful.

### Drastic improvements

Secret pharma-company data on their own probably won't help AlphaFold to improve its typically excellent accuracy with proteins, says Stephanie Wankowicz, a computational structural biologist at Vanderbilt University in Nashville, Tennessee. But the chemical diversity represented in company stores is likely to “drastically improve” predictions of drug interactions, she adds.

Brian Shoichet, a pharmaceutical chemist at the University of California, San Francisco, isn't sure that drug companies have enough data for AlphaFold to make substantial gains. “There's only so much novelty they're going to be able to squeeze out of that lemon,” he says.

But even a small improvement could be valuable, adds Shoichet, such as the ability to improve predictions of whether or not a drug will bind to a particular protein, which could indicate whether the drug will work. His own team conducts ‘virtual docking’ campaigns in which software – conventionally, programs based on physical principles – predict which of billions of chemicals can bind to a protein. The predictions are then tested in laboratory experiments. “If 20% of predictions work, we're happy. If you could raise to 50%, that would be a big change,” Shoichet says.

### Secrecy around structures

Access to the model will be restricted to consortium members at first, and Karanicolas hopes that more drug companies will sign up. He says the consortium wants to see how its model performs before considering expanding access to academic scientists.

Wankowicz would like to see companies make more of their structural data public in the first place. Just 6% of the PDB's 233,000 structures were submitted by drug companies, says Burley.

Shoichet agrees that there's a strong case for drug companies to share more structures, but he isn't holding his breath. “I've been part of these conversations for 30 years and it's never happened. I don't even bring it up any more.”

Burley is more optimistic that companies will see the benefits of greater openness, such as better tools for drug discovery. “In the post-AlphaFold-2 and AlphaFold-3 era, companies will be much more inclined to make the leap of faith.”

# 75% OF US SCIENTISTS WHO ANSWERED *NATURE* POLL CONSIDER LEAVING

More than 1,600 readers responded to the survey; many were looking for jobs in Europe and Canada.

By Alexandra Witze

**T**he massive changes in US research brought about by the new administration of President Donald Trump are causing many scientists in the country to rethink their lives and careers. More than 1,200 scientists who responded to a *Nature* poll – three-quarters of the total respondents – are considering leaving the United States following the disruptions prompted by Trump (see ‘So long, farewell’). Europe and Canada were among the top choices for relocation.

The trend was particularly pronounced among early-career researchers. Of the 690 postgraduate researchers who responded, 548 were considering leaving; 255 of 340 PhD students said the same.

Trump's administration has slashed research funding and halted broad swathes of federally funded science, under a government-wide cost-cutting initiative led by billionaire Elon Musk. Tens of thousands of federal employees, including many scientists, have been fired and rehired following a court order, with threats of more mass firings to come. Immigration crackdowns

**“A lot of my mentors have been telling me to get out, right now.”**

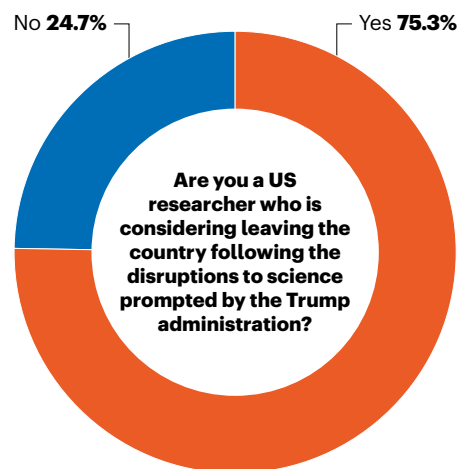
and battles over academic freedom have left researchers reeling as uncertainty and disruption permeate all aspects of the US research enterprise.

*Nature* asked readers whether these changes were causing them to consider leaving the United States. Responses were solicited last month on the journal's website, on social media and in the *Nature* Briefing e-mail newsletter. Roughly 1,650 people completed the survey.

Many respondents were looking to move to countries where they already had collaborators, friends, family or familiarity with the language. “Anywhere that supports science,” wrote one respondent. Some who had moved to the United States for work planned to return to their country of origin.

### SO LONG, FAREWELL

Many of the 1,608 respondents who answered the question below in a *Nature* survey said that the election of Donald Trump as president had affected their future plans.



But many more scientists had not planned to relocate, until Trump began gutting funding and firing researchers. “This is my home – I really love my country,” says a graduate student at a leading US university who works in plant genomics and agriculture. “But a lot of my mentors have been telling me to get out, right now.”

This student lost her research support and her stipend when the Trump administration shut down funding for the US Agency for International Development. Her adviser found emergency funds to support her in the short term, but she is scrambling to apply for teaching-assistant positions – now extremely competitive – to carry her through the rest of her programme.

### The last straw

She had already been considering doing a postdoctoral fellowship abroad because of her interest in international agriculture. Losing her funding and watching some of her colleagues get fired solidified that into a plan of action. “Seeing all of the work stopped is heartbreaking,” she says. “I've been looking very diligently for opportunities in Europe, Australia and Mexico.”

The student hopes to return to the United States in the future if the upheaval in the research landscape settles down. But for

now, the Trump administration “has made it very clear” that her area of interest, global food systems, “is not going to be a priority or a focus”, she says. “If I want to work in that space, I’m going to have to find somewhere else that prioritizes that.” Private US funding, such as that backed by philanthropy, is an option, but she anticipates that she would be competing with a glut of formerly federally funded projects.

### Opportunities abroad

Another respondent says that the disruptions have been “particularly horrible” for early-career scientists such as himself. “The PIs [principal investigators] I’ve spoken to feel they’ll be able to weather this storm,” he says. “As early-career investigators, we don’t have that luxury – this is a critical moment in our careers, and it’s been thrown into turmoil in a matter of weeks.”

This researcher, who grew up in the United States and is a physician-scientist at a major US university, is now looking at Canada. The day his US National Institutes of Health (NIH) grant was terminated, he e-mailed the department chair of colleagues at a Canadian university, who had been trying to entice him to take a position there. He and his wife, who is also a scientist, are now interviewing for jobs in the country, and hope to move by the end of the year.

Institutions outside the United States are taking advantage of the Trump turmoil, the researcher says. “From what I’m hearing from the places we’re talking to, and other people who are looking to take international jobs, a lot of universities in these countries are seeing this as a once-in-a-generation opportunity,” he says. “I think it has gone from ‘Can we recruit a few people?’ to ‘How many people can we actually take?’ – because the demand is there.”

A few of the respondents have no plans to leave the United States. “US academia has the best research facilities,” wrote one person. “I won’t go anywhere, this is ridiculous,” wrote another.

But many of the 1,200-plus individuals who said they are planning to leave highlighted the challenges they see ahead. “I am faculty and want to stay as long as I can [to] support my lab and students, but if the NIH is dramatically cut we may not have a choice to stay in the US,” one person wrote. Another respondent is actively applying only to positions in Europe: “I am transgender, and the 1–2 punch makes it improbable that the life I want to live is a viable option in this country.” (The Trump administration is attacking transgender rights through a variety of policies.)

One postgraduate researcher in a biomedical field summed up much of the thinking these days: “Don’t want to leave, but what’s the alternative?”

## Alien-esque mantis sits on fungus

This eerie but vibrant snap shows a flower mantis (*Creobroter* sp.) perched on top of the strange fruiting body of a *Cordyceps* fungus. In daylight, this insect is usually green, but wildlife photographer Irina Petrova Adamatzky used strategically placed coloured lights to accentuate its otherworldly appearance and that of the fungus. The shot won a bronze award in the 2025 World Nature Photography Awards.

This picture is one of *Nature’s* images of the month for March.

